

II. CLAIM AMENDMENTS

1.-18. (Cancelled)

19. (Currently amended) A method for determining a ciphering mode of communication between a mobile communication network and a mobile station in the mobile communication network, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the method comprising:

- monitoring at the mobile station signals sent from the mobile communication network to the mobile station;

- ~~in a situation in which the mobile communication network is configured to use an enciphered mode of communication, sending from the mobile communication network to the mobile station~~for a cipher mode control signal, the cipher mode control signal for setting the mobile station into an enciphered mode of communication;

- ~~if said monitored signals comprise~~responsive to reception of a cipher mode control signal from the mobile communication network, setting the mobile station into the enciphered mode of communication and indicating to a user of the mobile station that the mobile communication network is configured to use an enciphered mode of communication.

20. (Cancelled)

21. (Currently amended) A method according to claim 19, further comprising indicating to a user of the mobile station that the mobile communication network is configured to use an unciphered mode of communication if ~~said monitored signals do not comprise an~~o cipher mode control signal is received at the mobile station from the mobile communication network.

22. (Cancelled)

23. (Previously presented) A method according to claim 19, comprising determining the ciphering mode to be used in communication between the mobile communication network and the mobile station during establishment of communication between the mobile communication network and the mobile station.
24. (Previously presented) A method according to claim 19, comprising determining the ciphering mode to be used in communication between the mobile communication network and the mobile station prior to establishment of communication between the mobile communication network and the mobile station.
25. (Previously presented) A method according to claim 24, comprising determining the ciphering mode to be used in communication between the mobile communication network and the mobile station by performing a location update procedure.
26. (Previously presented) A method according to claim 19, comprising determining the ciphering mode to be used in communication between the mobile communication network and the mobile station during a communication handover procedure that occurs when the mobile station moves between a first part of the mobile communication network and a second part of the mobile communication network.
27. (Currently amended) A method according to claim 19, further comprising:
- maintaining a cipher mode indication data field in the mobile station;
 - initially setting said cipher mode indication data field into a first state indicative that the mobile communication network is configured to use an unciphered mode of communication;
 - ~~in a situation in which said monitored signals comprise a cipher mode control signal~~
responsive to reception of a cipher mode control signal from the mobile communication network, updating the state of the cipher mode indication data

field into a second state indicative that the mobile communication network is configured to use an enciphered mode of communication.

28. (Previously presented) A method according to claim 19, further comprising indicating a change in ciphering mode to a user of the mobile station.

29-30. (Cancelled)

31. (Previously presented) A method according to claim 19, wherein the mobile station comprises a display unit, the method comprising indicating the ciphering mode used in communication between the mobile communication network and the mobile station to a user of the mobile station using the display unit.

32. (Previously presented) A method according to claim 19, wherein the mobile station comprises a light source, the method comprising indicating the ciphering mode used in communication between the mobile communication network and the mobile station to a user of the mobile station using the light source.

33. (Previously presented) A method according to claim 28, wherein the mobile station comprises a display unit and an acoustic signal forming element, the method comprising indicating the ciphering mode used in communication between the mobile communication network and the mobile station to a user of the mobile station using the display unit and indicating a change in ciphering mode to a user of the mobile station using the acoustic signal forming element.

34. (Previously presented) A method according to claim 32, comprising indicating a change in ciphering mode with a flashing light.

35. (Currently amended) A method according to claim ~~19~~28, comprising indicating a change in ciphering mode by vibration.

36. (Previously presented) A method according to claim 19, wherein the mobile station comprises a radio resource management block, a cipher indication memory block, and a user interface block, the method comprising maintaining a cipher mode indication data field in the cipher indication memory block, monitoring signals sent

from the mobile communication network to the mobile station at the radio resource management block to determine whether said monitored signals comprise a cipher mode control signal, wherein upon determining that said monitored signals comprise a cipher mode control signal, the radio resource management block sets the cipher mode indication data field in said cipher indication memory block to correspond with cipher indication data in said cipher mode control signal.

37. (Original) A method according to claim 36, wherein said cipher indication memory block makes an interrupt request in response to a change in the cipher mode indication data field.
38. (Previously presented) A method according to claim 37, wherein the user interface block detects said interrupt request and sends an inquiry to the cipher indication memory block to inquire about the state of the cipher mode indication data field and the cipher indication memory block returns an indication of the state of the cipher mode indication data field in response to said inquiry.
39. (Previously presented) A method according to claim 38, wherein the mobile station comprises a cipher mode indicator and the user interface block controls the cipher mode indicator according to said indication of the state of the cipher mode indication data field.
40. (Previously presented) A method according to claim 36, wherein the cipher indication memory block provides an indication of the state of the cipher mode indication data field to the user interface block when the state of the cipher mode indication data field is changed.
41. (Previously presented) A method according to claim 40, wherein the mobile station comprises a cipher mode indicator and the user interface block controls the cipher mode indicator according to said indication of the state of the cipher mode indication data field.

42. (Original) A method according to claim 36, wherein the user interface block sends repeated inquiries to the cipher indication memory block about the state of the cipher mode indication data field, each inquiry being separated in time from the next by a predetermined interval and the cipher indication memory block returns an indication of the state of the cipher mode indication data field in response to each inquiry.
43. (Previously presented) A method according to claim 42, wherein the mobile station comprises a cipher mode indicator and the user interface block controls the cipher mode indicator according to said indication of the state of the cipher mode indication data field.
44. (Previously presented) A method according to claim 19, wherein the mobile station is capable of a first and a second type of communication, the method comprising indicating a ciphering mode of each of said first and second types of communication to a user of the mobile station.
45. (Previously presented) A method according to claim 44, wherein the first type of communication is a telephone call and said second type of communication is a short message (SMS).
46. (Previously presented) A method according to claim 44, comprising indicating the ciphering mode of the first type of communication in a manner distinguishable from that used to indicate the ciphering mode of the second type of communication.
47. (Previously presented) A method according to claim 44, further comprising indicating a change in ciphering mode of the first type of communication and indicating a change in ciphering mode of the second type of communication.
48. (Previously presented) A method according to claim 19, wherein a first mobile station and a second mobile station are in communication with each other through at least one mobile communication network, the method comprising indicating the

ciphering mode between the mobile communication network and the first mobile station to a user of the second mobile station.

49. (Currently amended) A method according to claim 19, ~~wherein~~comprising using the mobile station ~~is used~~ in connection with an external data processor for communication between the mobile communication network and the external data processor, the external data processor comprising a display unit, the method comprising indicating a ciphering mode used in communication between the mobile station and the mobile communication network on the display unit of the external data processor.
50. (Previously presented) A method according to claim 49, wherein the external data processor further comprises an acoustic signal forming element, the method comprising indicating a change in ciphering mode used in communication between the mobile station and the mobile communication network with the acoustic signal forming element of the external data processor.
51. (Currently amended) A method according to claim 49, wherein the mobile station comprises a cipher indication memory block which maintains a cipher mode indication data field indicative of a ciphering mode used in communication between the mobile communication network and the mobile station, the method comprising ~~sends~~ sending an indication of the state of the cipher mode indication data field from the mobile station to the external data processor.
52. (Previously presented) A method according to claim 49, comprising connecting the mobile station and the external data processor by means of a connection bus.
53. (Currently amended) A method according to claim 49, wherein the mobile station comprises a cipher indication memory block which maintains a cipher mode indication data field indicative of a ciphering mode used in communication between the mobile communication network and the mobile station, ~~and the external data processor is provided with application software for monitoring the ciphering mode used in communication between the mobile station and the mobile~~

~~communication network, wherein the application software in said external data processor sends~~the method comprising receiving at the mobile station a cipher mode inquiry message to from the external data processor -the mobile station to determine and sending an indication of the state of the cipher mode indication data field maintained in said cipher indication memory block offrom the mobile station to the external data processor responsive to said cipher mode inquiry message.

54. (Cancelled)

55. (Currently amended) A method according to claim 19, ~~wherein a~~comprising using the mobile station ~~is~~ in communication with a terminal in a fixed line communication network, the method further comprising indicating a ciphering mode used in communication between the fixed line communication network and the terminal in the fixed line communication network to a user of the mobile station.

56. (Previously presented) A method according to claim 55, wherein the mobile station sends an inquiry message to the terminal in the fixed line communication network to determine the ciphering mode used in communication between the fixed line communication network and said terminal in the fixed line network.

57. (Previously presented) A method according to claim 56, wherein if the mobile station does not receive a response to said inquiry message, the mobile station indicates that the ciphering mode is unknown.

58. (Previously presented) A method according to claim 56, wherein if the mobile station receives a response to said inquiry message, but cannot interpret said response the mobile station indicates that the ciphering mode is unknown.

59. (Currently amended) An apparatus for determining a ciphering mode of communication between a mobile communication network and a mobile station in the mobile communication network, the mobile station being capable of

communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the apparatus comprising:

- means for monitoring signals sent from the mobile communication network to the mobile station;
- means for determining if said monitored signals comprise a cipher mode control signal, said cipher mode control signal for setting the mobile station into an enciphered mode of communication;
- means for setting the mobile station into an enciphered mode of communication responsive to reception of a cipher mode control signal from the mobile communication network; and
- means for indicating a ciphering mode to a user of the mobile station, said means being operable to indicate that the mobile communication network is configured to use an enciphered mode of communication -if said monitored signals comprise a cipher mode control signal.

60. (Cancelled)

61. (Previously presented) An apparatus according to claim 59, wherein said means for indicating a ciphering mode to a user of the mobile station are further configured to indicate that the mobile communication network is configured to use an unciphered mode of communication if said monitored signals do not comprise a cipher mode control signal.

62. (Previously presented) An apparatus according to claim 59, wherein the apparatus is operable to determine the ciphering mode to be used in communication between the mobile communication network and the mobile station during establishment of communication between the mobile communication network and the mobile station.

63. (Previously presented) An apparatus according to claim 59, wherein the apparatus is operable to determine the ciphering mode to be used in communication

between the mobile communication network and the mobile station prior to establishment of communication between the mobile communication network and the mobile station.

64. (Previously presented) An apparatus according to claim 63, wherein the apparatus is operable to determine the ciphering mode to be used in communication prior to establishment of communication between the mobile communication network and the mobile station by performing a location update procedure.
65. (Previously presented) An apparatus according to claim 59, further comprising:
- means for maintaining a cipher mode indication data field;
 - means for setting said cipher mode indication data field initially into a first state indicative that the mobile communication network is configured to use an unciphered mode of communication;
 - means for changing the state of the cipher mode indication data field into a second state indicative that the mobile communication network is configured to use an enciphered mode of communication if said monitored signals comprise a cipher mode control signal.
66. (Previously presented) An apparatus according to claim 59, wherein said means for indicating a ciphering mode to a user of the mobile station comprise a display unit.
67. (Previously presented) An apparatus according to claim 59, wherein said means for indicating a ciphering mode to a user of the mobile station comprise a light source.
68. (Previously presented) An apparatus according to claim 59, wherein the apparatus further comprises means for indicating a change in ciphering mode to a user of the mobile station.

69. (Previously presented) An apparatus according to claim 68, wherein said means for indicating a change in ciphering mode to a user of the mobile station comprise an acoustic signal forming element.
70. (Previously presented) An apparatus according to claim 68, wherein said means for indicating a change in ciphering mode to a user of the mobile station comprise means for generating vibration.
- 71-73. (Cancelled).
74. (Currently amended) An apparatus according to claim 59, comprising a radio resource management block and a cipher indication memory block, ~~wherein the resource management block comprises said means for monitoring signals sent from the mobile communication network to the mobile station and said means for determining if said monitored signals comprise a cipher mode control signal and comprising a cipher mode indication data field is maintained in the cipher indication memory block,~~ the radio resource management block being further operable to set the cipher mode indication data field in said cipher indication memory block to correspond with cipher indication data in a cipher mode control signal received from the mobile communication network.
75. (Previously presented) An apparatus according to claim 74, wherein said cipher indication memory block is operable to issue an interrupt request in response to a change in the cipher mode indication data field.
76. (Previously presented) An apparatus according to claim 75, further comprising a user interface block, wherein the user interface block is operable to detect said interrupt request and to send an inquiry to the cipher indication memory block to inquire about the state of the cipher mode indication data field and the cipher indication memory block is operable to return an indication of the state of said cipher mode indication data field in response to said inquiry.

77. (Previously presented) An apparatus according to claim 76, further comprising a cipher mode indicator, wherein the user interface block is operable to control the cipher mode indicator according to said indication.
78. (Previously presented) An apparatus according to claim 74, further comprising a user interface block, wherein the cipher indication memory block is operable to provide an indication of the state of said cipher mode indication data field to the user interface block when the state of said cipher mode indication data field is changed.
79. (Previously presented) An apparatus according to claim 78, further comprising a cipher mode indicator, wherein the user interface block is operable to control the cipher mode indicator according to said indication.
80. (Previously presented) An apparatus according to claim 74, further comprising a user interface block, wherein the user interface block is operable to send repeated inquiries to the cipher indication memory block about the state of the cipher mode indication data field, each inquiry being separated in time from the next by a predetermined interval and the cipher indication memory block is operable to return an indication of the state of the cipher mode indication data field in response to each inquiry.
81. (Previously presented) An apparatus according to claim 80, further comprising a cipher mode indicator, wherein the user interface block is operable to control the cipher mode indicator according to said indication.
82. (Currently amended) A mobile station comprising apparatus for determining a ciphering mode of communication between a mobile communication network and the mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the apparatus comprising:
- means for monitoring signals sent from the mobile communication network to the mobile station;

- means for determining if said monitored signals comprise a cipher mode control signal, said cipher mode control signal for setting the mobile station into an enciphered mode of communication;
- means for setting the mobile station into an enciphered mode of communication responsive to reception of a cipher mode control signal from the mobile communication network; and
- means for indicating a ciphering mode to a user of the mobile station, said means being operable to indicate that the mobile communication network is configured to use an enciphered mode of communication if said monitored signals comprise a cipher mode control signal.

83. (Cancelled)

84. (Previously presented) A mobile station according to claim 82, wherein said means for indicating a ciphering mode to a user of the mobile station are further configured to indicate that the mobile communication network is configured to use an unciphered mode of communication if said monitored signals do not comprise a cipher mode control signal.

85. (Previously presented) A mobile station comprising apparatus for determining a ciphering mode of communication between a mobile communication network and the mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the mobile station comprising:

- means for monitoring signals sent from the mobile communication network to the mobile station;
- means for determining if said monitored signals comprise a cipher mode control signal;
- means for setting the mobile station into an enciphered mode of communication if said monitored signals comprise a cipher mode control signal;

- means for indicating a ciphering mode to a user of the mobile station, comprising means for indicating that the mobile communication network is configured to use an enciphered mode of communication if said monitored signals comprise a cipher mode control signal and means for indicating that the mobile communication network is configured to use an unciphered mode of communication if said monitored signals do not comprise a cipher mode control signal.
86. (Currently amended) A mobile station according to claim 85, comprising a radio resource management block and a cipher indication memory block, ~~wherein the radio resource management block comprises said means for monitoring signals sent from the mobile communication network to the mobile station and said means for determining if said monitored signals comprise a cipher mode control signal and~~ comprising a cipher mode indication data field ~~is maintained in the cipher indication memory block~~, the radio resource management block being further operable to set the cipher mode indication data field in said cipher indication memory block into one of a first state and a second state, said first state being indicative that the mobile communication network is configured to use an unciphered mode of communication and said second state being indicative that the mobile communication network is configured to use an enciphered mode of communication.
87. (Previously presented) A mobile station according to claim 86, wherein said cipher indication memory block is operable to issue an interrupt request in response to a change in the cipher mode indication data field.
88. (Previously presented) A mobile station according to claim 87, further comprising a user interface block, wherein the user interface block is operable to detect said interrupt request and to send an inquiry to the cipher indication memory block to inquire about the state of the cipher mode indication data field and the cipher indication memory block is operable to return an indication of the state of said cipher mode indication data field in response to said inquiry.

89. (Previously presented) A mobile station according to claim 88, wherein said user interface block is operable to control said means for indicating a ciphering mode to a user of the mobile station in response to said indication of the state of the cipher mode indication data field.
90. (Previously presented) A mobile station according to claim 86, further comprising a user interface block, wherein the cipher indication memory block is operable to provide an indication of the state of said cipher mode indication data field to the user interface block when the state of said cipher mode indication data field is changed.
91. (Previously presented) A mobile station according to claim 90, wherein said user interface block is operable to control said means for indicating a ciphering mode to a user of the mobile station in response to said indication of the state of the cipher mode indication data field.
92. (Previously presented) A mobile station according to claim 86, further comprising a user interface block, wherein the user interface block is operable to send repeated inquiries to the cipher indication memory block about the state of the cipher mode indication data field and the cipher indication memory block is operable to return an indication of the state of the cipher mode indication data field in response to each inquiry.
93. (Previously presented) A mobile station according to claim 92, wherein said user interface block is operable to control said means for indicating a ciphering mode to a user of the mobile station in response to said indication of the state of the cipher mode indication data field.
94. (Previously presented) A system for determining a ciphering mode of communication between a mobile communication network and a mobile station in the mobile communication network, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the system comprising:

- means in the mobile communication network for determining whether an enciphered mode of communication is to be used in communication between the mobile communication network and the mobile station according to a setting of the mobile communication network;
- means in the mobile communication network for sending a cipher mode control signal from the mobile communication network to the mobile station in a situation where an enciphered mode of communication is to be used in communication between the mobile communication network and the mobile station, said cipher mode control signal for setting the mobile station into an enciphered mode of communication;
- means in the mobile station for monitoring signals sent from the mobile communication network to the mobile station;
- means in the mobile station for determining if said monitored signals comprise a cipher mode control signal;
- means in the mobile station for setting the mobile station into an enciphered mode of communication if said monitored signals comprise a cipher mode control signal; and
- means for indicating a ciphering mode to a user of the mobile station, said means being operable to indicate that the mobile communication network is configured to use an enciphered mode of communication if said monitored signals comprise a cipher mode control signal.

95. (Cancelled)

96. (Previously presented) A system according to claim 94, wherein said means for indicating a ciphering mode to a user of the mobile station are further configured to indicate that the mobile communication network is configured to use an unciphered mode of communication if said monitored signals do not comprise a cipher mode control signal.

97. (Previously presented) An external data processor capable of use with a mobile station for communication between the external data processor and a mobile communication network via the mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the external data processor comprising ~~apparatus~~an input for receiving from the mobile station information concerning a ciphering mode used in communication between the mobile station and the mobile communication network and ~~means~~a display unit ~~responsive to information received from the mobile station for indicating via a user interface that an enciphered~~ing mode of communication is to be used in communication between the mobile station and the mobile communication network.

98-121. (Cancelled)

122. (Currently amended) An apparatus for determining a ciphering mode of communication between a mobile communication network and a mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the apparatus comprising:

- a radio resource management block for monitoring signals sent from the mobile communication network to the mobile station and for determining if said monitored signals comprise a cipher mode control signal;
- ~~an~~ a cipher mode indicator for indicating a ciphering mode to a user of the mobile station, said cipher mode indicator being operable to indicate that the mobile communication network is configured to use an enciphered mode of communication responsive to an indication from the radio resource management block that said monitored signals comprise a cipher mode control signal.

123. (Currently amended) An apparatus for determining a ciphering mode of communication between a mobile communication network and a mobile station, the mobile station being capable of communication in at least one enciphered

mode of communication and at least one unciphered mode of communication, the apparatus comprising:

- a radio resource management block for monitoring signals sent from the mobile communication network to the mobile station and for determining if said monitored signals comprise a cipher mode control signal;
- an cipher mode indicator for indicating that the mobile communication network is configured to use an enciphered mode of communication, responsive to an indication from the radio resource management block that said monitored signals comprise a cipher mode control signal.

124. (New) An apparatus according to claim 122, comprising a cipher indication memory block having a cipher mode indication data field, the radio resource management block being operable to set the cipher mode indication data field of said cipher indication memory block to correspond with cipher indication data in a cipher mode control signal received from the mobile communication network.

125. (New) An apparatus according to claim 124, wherein said cipher indication memory block is operable to issue an interrupt request in response to a change in the cipher mode indication data field.

126. (New) An apparatus according to claim 125, further comprising a user interface block, wherein the user interface block is operable to detect said interrupt request and to send an inquiry to the cipher indication memory block to inquire about the state of the cipher mode indication data field and the cipher indication memory block is operable to return an indication of the state of said cipher mode indication data field in response to said inquiry.

127. (New) An apparatus according to claim 126, wherein the user interface block is operable to control the cipher mode indicator according to said indication.

128. (New) An apparatus according to claim 124, further comprising a user interface block, wherein the cipher indication memory block is operable to provide an

indication of the state of said cipher mode indication data field to the user interface block when the state of said cipher mode indication data field is changed.

129. (New) An apparatus according to claim 128, wherein the user interface block is operable to control the cipher mode indicator according to said indication.
130. (New) An apparatus according to claim 124, further comprising a user interface block, wherein the user interface block is operable to send repeated inquiries to the cipher indication memory block about the state of the cipher mode indication data field, each inquiry being separated in time from the next by a predetermined interval and the cipher indication memory block is operable to return an indication of the state of the cipher mode indication data field in response to each inquiry.
131. (New) An apparatus according to claim 130, wherein the user interface block is operable to control the cipher mode indicator according to said indication.
132. (New) A mobile station capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the mobile station comprising:
- a radio resource management block for monitoring signals sent from a mobile communication network to the mobile station and for determining if said monitored signals comprise a cipher mode control signal;
 - a cipher mode indicator for indicating a ciphering mode to a user of the mobile station, said cipher mode indicator being operable to indicate that the mobile communication network is configured to use an enciphered mode of communication responsive to an indication from the radio resource management block that said monitored signals comprise a cipher mode control signal.
133. (New) A system according to claim 94, wherein the ciphering mode to be used in communication between the mobile communication network and the mobile station is specified by an operator of the mobile communication network.

134. (New) A system according to claim 94, wherein communication between the mobile communication network and the mobile station takes place at least in part over a radio link.
135. (New) A method according to claim 94, wherein the mobile communication network is a GSM network.